Research Article

Design of Multichannel Resource Adaptive Scheduling Algorithm for English Online Translation Teaching

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In order to optimize the multichannel resource scheduling of English online translation teaching and realize the goal of adaptive scheduling algorithm, a multichannel resource adaptive scheduling algorithm for English online translation teaching is designed. The clustering algorithm is used to sort out various English online translation teaching multichannel resources and remove redundancy. Build a unified standard specification; establish an English online translation teaching resource scheduling model with three modules of foundation layer, environment layer, and application layer; form an easy-to-find data set; build an adaptive scheduling algorithm function module of system management, standard management, media materials, online courses, courseware library, and test question library; and optimize the integration speed under multiobjective scheduling algorithm; this paper analyzes the multichannel resource scheduling process of English online translation teaching and realizes the research on the designed adaptive scheduling algorithm. The experimental results show that the test results of each functional module of the scheduling platform under the designed algorithm meet the functional requirements, and the update amount of resources is close to the update upper limit, which can reasonably manage teaching resources and improve students’ interest and learning ability.

1. Introduction

Multiple teaching resources refer to the sum of information, technology, and environment provided to ensure the orderly and effective development of English teaching activities, such as English teachers’ textbook classroom, English training base, and English education policy [1, 2]. Before the era of big data, the multichannel teaching resources of English translation courses were mainly traditional multichannel teaching resources such as teachers, teaching materials, and classrooms, and these resources were very limited. In the era of big data, various platform resources, information resources, and other teaching resources are not only complete in categories but also extremely rich in content [3], such as blackboard network teaching application management platform, Muke microblog, network forum, and other platform resources, such as e-books, courseware, exercise bank, network audio, and video and other information resources. These multichannel teaching resources have strong interaction and timeliness, which not only brings diversified choices for teachers to organize teaching but also can stimulate students’ multiple senses, improve their learning interest and learning effect, and change the traditional teaching and information dissemination mode [4]. As for the multichannel teaching resources of English online translation, because English is the first official language in the world, its multichannel teaching resources become more abundant and diversified.

Reference [5] tracks state information on common core teaching and presents an analysis of English/language arts and close reading resources, using qualitative coding and descriptive analysis to identify criteria and topics in 177 individual resources in the form of articles, curriculum guides, teaching AIDS, professional development, and student work. Reference [6] proposed the integration of technology into English teaching in the Sultanate of Oman through communities of practice and explored the integration of technology among 11 public school English teachers.
in the Sultanate of Oman through the use of communities of practice. It can boost the Sultanate of Oman (a neighboring GCC country) policy implementation and education of second language teachers. However, through analysis, it is found that most of these resources are just simple stacking of resources and lack of processing and are not clear in classification. They do not follow the relevant provisions of resource construction, and the renewal of resources is very slow. Students and teachers cannot effectively use these resources for learning and application. After teachers supply massive resources to students, they lack certain guidance on how to use resources for learning. For students, there is also a lack of effective supervision, no corresponding in-depth research, and no evaluation of students’ learning. Based on the above research, an adaptive scheduling algorithm for multichannel resources of English online translation teaching is designed, and the clustering algorithm is used to sort out all kinds of multichannel resources of English online translation teaching, and then the redundancy is removed. On this basis, build a unified standard specification, build an English online translation teaching resource scheduling model, form an easy to find data set, optimize the integration speed under the multiobjective scheduling algorithm, analyze the multichannel resource scheduling process of English online translation teaching, and realize the research on the multichannel resource adaptive scheduling algorithm of English Online translation teaching. The research shows that the test results of each functional module of the scheduling platform under the algorithm meet the functional requirements, and the update amount of multichannel resources is close to the update upper limit, which can reasonably manage teaching resources and improve students’ interest and learning ability.

2. Data Preprocessing of Multichannel Resources in English Online Translation Teaching

Because the attributes of teaching multichannel resources are decentralized and changeable, it is necessary to preprocess all English online translation teaching multichannel resource data in the process of integrating teaching multichannel resources [7, 8]. The specific process is as follows:

Step 1. English online translation teaching multichannel resources have the characteristics of large storage capacity and dynamic expansibility. According to their different forms, they are divided into two types: e-English online translation book resources and digital English online translation video resources [9–11].

Step 2. The books purchased from the library will be distributed with CD-ROM materials. Most of these materials are converted into a video stream format or media format storage files through digital compression technology.

Step 3. When scheduling the multichannel resources of English online translation teaching, schedule them according to different course contents and course standards. The collected course data are analyzed and calculated by a clustering algorithm. This paper analyzes the category of teaching multichannel resources and the redundant processing of teaching multichannel resources data. The details are as follows.


The clustering algorithm is used to analyze the collected multichannel resources of English online translation teaching, and different objects are divided into different clusters [12]. The specific value of the teaching multichannel resource category is determined according to the actual situation. The specific implementation process is as follows:

Suppose a given training sample \( \{x_1, x_2, \cdots, x_n\} \), each \( x_n \in R^n \). \( K \) cluster centroids are randomly selected and expressed as \( \{u_1, u_2, \cdots, u_K\} \), each \( u_i \in R^n \). Loop the following steps until convergence, and calculate the class to which each sample \( i \) belongs:

\[
C_i = (x_n - u_n) \times K. \tag{1}
\]

In formula (1), through the calculation of \( C_i \), the similarity between each sample and the centroid point can be calculated. In this process, the Euclidean distance needs to be used as the evaluation criterion for the similarity. On this basis, for the sample data of the same category, the centroid of the category is recalculated, thereby completing the update of the teaching multichannel resource category data [13]. Then, the average value of the sample data of the same category is used as the basis for updating the centroid point, and the above steps are repeated until the category analysis of teaching multichannel resources is completed.

2.2. Data De-Redundancy.

The essence of de-redundancy processing of teaching multichannel resource data is a high degree of combination of digital resources, and a resource adaptive scheduling architecture is constructed. Sharing lays a certain foundation [14]. The data de-redundancy processing of teaching multichannel resources has the advantages of high transmission rate and shared large-capacity integrated architecture. It does not need to occupy large space but also can realize remote transmission, data backup, and highly scalable storage technology.

In the redundant processing of teaching multichannel resource data, the communication between nodes can run at the same time without interference [15, 16]. In the redundant processing of teaching multichannel resource data, a storage module is formed and mainly from data acquisition and data processing analysis.

2.2.1. Data Acquisition. Integrate multiple distributed English online translation teaching resources to obtain data indicators such as course data, course content, and degree of interest [17].

2.2.2. Data Processing. The main operation step in the adaptive scheduling algorithm is data processing, and the processing result directly affects the overall output result. During the processing, redundant units are removed from...
the collected data and converted into numerical data, which is convenient for later analysis and calculation [18]. Normalization deals with large differences in values, all values are controlled within a reasonable range, and the variable values of each indicator are between 0 and 1.

In the multichannel resource data of multimedia teaching courseware, redundant data exists objectively. However, if the operation control and processing are improper in the process of resource development and production, the application effect of multichannel resources will be reduced and the implementation and efficiency of teaching will be affected [19, 20]. Scientific de-redundant processing of teaching multichannel resource data, effective technical design, and systematic comprehensive consideration can effectively control the amount of redundant data, realize the optimization of teaching multichannel resource data, and reflect the teaching advantages.

3. Design of Multichannel Resource Adaptive Scheduling Algorithm for English Online Translation Teaching

After the multichannel resource data preprocessing in English online translation teaching, the resource adaptive scheduling algorithm is designed [21, 22]. The main steps are as follows:

1. Delete the complex database in the existing resource system, and establish a similar and high-standard resource adaptive scheduling database [23, 24]

2. It is necessary to integrate and utilize these resources according to the established unified standards [25] and establish a teaching multichannel resource scheduling model

The specific functions of this model are shown in Table 1.

It can be seen from Table 1 that the multichannel resource adaptive scheduling model for English online translation teaching has two levels of columns. The main columns include course construction, teaching online, teaching and research blog, special columns, and member home page. Nonmajor columns are set as follows: course research, course discussion, expert report, teaching reform trends, multichannel teaching resources, synchronous teaching, high-quality resources, scientific research newsletter, topic online, teaching method discussion, and research center. The column setting of the multichannel resource adaptive scheduling model for English online translation teaching is conducive to the use of resources, especially taking resources as an object of teaching and scientific research, so that they have more complete attribute constraints.

3.1. Composition Module of Teaching Multichannel Resource Scheduling Model. Due to the relatively small amount of data in the resource system and the loose coupling mode, a data integration scheme suitable for English online translation teaching multichannel resource scheduling is proposed based on the modules of teaching multichannel resource scheduling model [26–28]. The model module composition is shown in Figure 1.

In order to realize resource scheduling and facilitate implementation in stages and steps, the scheduling model is divided into three layers: base layer, environment layer, and application layer.

3.2. Teaching Multichannel Resource Scheduling Algorithm Function Module. The function module of teaching multichannel resource scheduling algorithm integrates the management, scheduling, and publishing of teaching multichannel resources [29–31]. Based on the multichannel resources of English online translation teaching, realize the demand of coconstruction and scheduling of teaching multichannel resources [32–34]. The functional module of teaching multichannel resource scheduling algorithm is shown in Figure 2.

According to Figure 2, specific analysis is made on each functional module.

3.2.1. System Management Module. Teachers can modify, delete, and update any resources in the model and can divide all kinds of resources into groups and set the weights of groups [35]. Backup and restore of resources can also be performed when necessary.

3.2.2. Standard Management Module. Select the teaching multitype resources; modify or delete the inappropriate resources in the model according to the standard. The course resources in distributed storage can be synchronized to quickly retrieve the resources.

3.2.3. Media Material Module. In view of the particularity of online English translation, the hierarchical management of multipath teaching resources is realized by adopting the hierarchical method. This will help achieve centralized management of resources, form a professional management system, and ultimately achieve multidisciplinary resource management.

3.2.4. Online Course Module. Network courses are established according to teaching strategies and teaching objectives. The network course module breaks the traditional teaching method, integrates the teaching content into the network environment, and enables students to query resources freely on the Internet. Compared with traditional teaching methods, online courses are more suitable for the relative separation between teachers and students, with students learning by themselves and teachers guiding. There are two elements in the network course module: one is formed according to the teaching purpose and teaching strategy; second is the network environment. In teaching practice, reasonable and standardized online teaching is a very important teaching means. A complete set of online teaching should include teaching materials, analysis and evaluation, and teaching suggestions.

3.2.5. Courseware Library and Test Question Library Module. Lesson bank is a good assistant for teachers in the
Table 1: Teaching multichannel resource scheduling model structure content.

<table>
<thead>
<tr>
<th>Model name</th>
<th>The main columns</th>
<th>Nonmain column</th>
<th>The specific content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curricular construction</td>
<td>Course study</td>
<td></td>
<td>Course emphasis, course nature, course content interpretation, course content standard framework (including basic module and elective module)</td>
</tr>
<tr>
<td>Teaching online</td>
<td>Curriculum discussion</td>
<td></td>
<td>Course concept, content discussion, improvement, and improvement of course content</td>
</tr>
<tr>
<td>Teaching and research blog</td>
<td>Expert report</td>
<td></td>
<td>Expert report, teaching skill learning, teaching research, and discussion</td>
</tr>
<tr>
<td>Special column</td>
<td>Educational reform trends</td>
<td></td>
<td>The latest teaching practice content, latest research, and curriculum reform</td>
</tr>
<tr>
<td>Member home page</td>
<td>Multiple teaching resources</td>
<td></td>
<td>Teaching reference, teaching plan, resource scheduling, the latest books and materials of English online translation teaching specialty, etc.</td>
</tr>
<tr>
<td>First level column</td>
<td>Synchronous teaching</td>
<td></td>
<td>Development and utilization of multichannel teaching resources, teaching material explanation methods, and successful experience</td>
</tr>
<tr>
<td>Curriculum construction</td>
<td>Boutique resources</td>
<td></td>
<td>Representative teaching cases and excellent course projects</td>
</tr>
<tr>
<td>Teaching online</td>
<td>Scientific research newsletter</td>
<td></td>
<td>School based teaching and research, interschool cooperation, regional teaching, and research and network discussion activities</td>
</tr>
<tr>
<td>Teaching and research blog</td>
<td>Exchange and cooperation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special column</td>
<td>Discussion on teaching methods</td>
<td></td>
<td>Discussion on various teaching methods</td>
</tr>
<tr>
<td>Member home page</td>
<td>Research center</td>
<td></td>
<td>Special teaching projects, problem study</td>
</tr>
<tr>
<td>First level column</td>
<td>—</td>
<td></td>
<td>Course content, teaching resources, organizational practice</td>
</tr>
<tr>
<td>Curriculum construction</td>
<td>—</td>
<td></td>
<td>Teacher topic homepage</td>
</tr>
</tbody>
</table>

Figure 1: Model composition module.
teaching process. Based on educational measurement principle and precise mathematical model, a practical measuring instrument is constructed. The question bank module is much more complicated than other modules. It not only contains the management and correction of examination papers but also includes the analysis functions such as score statistics. The cases in the curriculum bank and question bank are mainly experts, scholars, and senior teachers.

3.3. Implementation of Multichannel Resource Adaptive Scheduling Algorithm

3.3.1. Integration Speed Optimization Based on Multiobjective Scheduling Algorithm. In order to meet the integration optimization speed under the multiobjective scheduling algorithm, the following parameters are mainly considered:

(1) Schedule completion time: measure based on data such as past running time, number of requests, and estimated running time. Then, the time $T_{cp}$ for requesting $S_i$ evaluation to be realized is

$$T_{cp} = Q_s + \sum_{k=1}^{n} T_k.$$  (2)

In the formula, $Q_s$ represents the time required in node $s$, and $T_k$ represents the calculation time of the $i$ of $S_j$. This value is the average of the operation time before this request. The more $S_j$ is implemented, the closer the value of $T_{cp}$ will be to the real completion time of scheduling. The smaller the value of $T_{cp}$, the faster the scheduling can be realized. Therefore, search the smallest node of $T_{cp}$ and ensure the operation of the node, so as to ensure the real-time scheduling.

(2) Scheduling load balancing: online translation of English teaching, when a node loads more than the limit, can support the performance of the whole system which will be affected by a lot of factors; so, in order to balance the load, less important tasks must be a assigned to a less important node, so that it can be between each node to create a “refuse to integrate” threshold. When the load of a node exceeds a threshold value, the node will be rejected automatically, and then the request will be sent out, so that the nodes that have not reached the key point can be collected conveniently, as follows:

$$L_{ij} = T_{cp} \times U_{jk} \times F_{hj}.$$  (3)

In the formula, $U_{jk}$ represents the critical number of requests and $F_{hj}$ represents the critical interval value, so as to complete the integration speed optimization under the multiobjective scheduling algorithm.
3.3.2. Multichannel Resource Scheduling Process for English Online Translation Teaching.

In this scheduling process, two types of switching points are set between two different nodes, and in the distribution of multiple transmission networks, the converter will be allocated from one responding node to another node. With the above scheduling method, once it is found that there is airspace capacity in a node, the teaching multichannel resources will be integrated and allocated to the nodes with available capacity.

To sum up, the multichannel resource adaptive scheduling process of English online translation teaching is shown in Figure 3.

According to Figure 3, the multichannel resource adaptive scheduling process of English online translation teaching is realized.

3.3.3. Implementation of Adaptive Scheduling Algorithm for Teaching Multichannel Resources.

Table 3: Experimental configuration parameters.

<table>
<thead>
<tr>
<th>Configuration parameter</th>
<th>Paper algorithm</th>
<th>Reference algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of resource uploads</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Thinking time</td>
<td>0.5 s</td>
<td></td>
</tr>
<tr>
<td>Tolerance time</td>
<td>1.2 s</td>
<td></td>
</tr>
<tr>
<td>Test URL</td>
<td>192.168.56.2/computer:8080</td>
<td></td>
</tr>
</tbody>
</table>

3.3.3.2. Multichannel Resource Scheduling Process for English Online Translation Teaching. In this scheduling process, two types of switching points are set between two different nodes, and in the distribution of multiple transmission networks, the converter will be allocated from one responding node to another node. With the above scheduling method, once it is found that there is airspace capacity in a node, the teaching multichannel resources will be integrated and allocated to the nodes with available capacity.

To sum up, the multichannel resource adaptive scheduling process of English online translation teaching is shown in Figure 3.

According to Figure 3, the multichannel resource adaptive scheduling process of English online translation teaching is realized.

3.3.3. Implementation of Adaptive Scheduling Algorithm for Teaching Multichannel Resources. The adaptive scheduling algorithm of teaching multichannel resources is mainly
realized through the distributed resource database, which is the resource database distributed and stored in multiple computers in different nodes, which is composed of computer network connection. The distributed resource database module is the physical distribution of each resource storage node. Logically, these nodes constitute an overall resource database module. The distributed resource database is equivalent to a resource database cluster with centralized management and local resources connected through the network. The distributed resource database module takes the computer P2P network as the medium, connects a variety of geographically dispersed independent resource databases, logically constructs a global logical view, and forms these distributed centralized resource databases into a unified resource database module for control and management. In the distributed resource base module, all node resource base modules can independently support local applications and provide resource scheduling capability for other nodes.

The distributed resource base module can be divided into isomorphic distributed resource base module and heterogeneous distributed resource base module according to the concept of centralized resource base management. Whether it is heterogeneous or isomorphic distributed resource library, the distributed resource library module is divided into a four-tier model architecture by virtue of the distributed resource library module criterion, and its architecture is shown in Figure 4.

The distributed resource base is divided into four layers: global external mode, global conceptual mode, local conceptual mode, and local internal mode. Each adjacent layer mode has a corresponding interlayer image, and the switching between modes is completed through the interlayer image. The four-layer distributed resource base module is also applicable to the isomorphic distributed resource base module formed by the same resource base and the heterogeneous distributed resource base module composed of different kinds of resource bases.

Simple object access protocol is simple and efficient, but it is also vulnerable to external attacks, resulting in malicious theft of scheduling resources. Through user security authentication, it ensures the normal operation of English multimedia teaching multichannel resource scheduling platform. Data encryption technology is generally used in the field of network security authentication. Its principle is to reencode and hide the information content, so that illegal users can not carry out malicious interference. The optimization method of platform user security authentication can improve the security of platform users and at the same time provide them with high-quality service experience.

The filling of data in the adaptive scheduling algorithm is to expand the data to the length of \( k \times 512 \) bits, \( k \) is an integer, and the remaining bits are regarded as the input data length in the next stage, so that the data length is always maintained at a multiple of 512. The expanded data is isolated by 512 bits, and 512 bits can be isolated by 32 bits to build several combinations.

Set the basic bit-by-bit operation of the following four adaptive scheduling algorithms:

\[
F(a, b, c) = (a \cup b) \cup ((\neg a) \cup c), \tag{4}
\]

\[
G(a, b, c) = (a \cup c) \cup (b \cup (\neg c)), \tag{5}
\]

\[
H(a, b, c) = a \cup b \cup c, \tag{6}
\]

\[
I(a, b, c) = b \cup (a \mid (\neg a)). \tag{7}
\]

Set \( Y_j \) to complete the \( j \)th packet conversion of the above operations, which is recorded as

\[
a = b + (a + X(b, c, d) + Y_j + t_j). \tag{8}
\]

Multiple 32-bit buffers are used to calculate the information summary, the buffers are set as \( A, B, C, \) and \( D \), which are described as link variables, and the expressions of the four buffers are recorded as

\[
A = X \times a,
\]

\[
B = X \times b,
\]

\[
C = X \times c,
\]

\[
D = X \times d. \tag{9}
\]

After the four link variables are set, they can be given corresponding weights \( a, b, c, \) and \( d \). At this time, the information defined in formula (4) to formula (7) is used to convert and encrypt the user information.
The adaptive scheduling algorithm can be used to judge the identity of the multichannel resource scheduling platform for English online translation teaching. After the information transmitted from the client to the server is extracted, a new round of calculation will be taken to compare whether both parties have the same password plaintext. The password is encrypted by an adaptive scheduling algorithm, so there is no need to take any decryption calculation. The user identity determination mechanism under the adaptive scheduling algorithm is shown in Figure 5.

In Figure 5, $R_a$ and $R_b$ represent random values. In order to prevent malicious attacks, an arbitrary value, user password, and other data are used for user identity verification. The following is the specific verification calculation process:

In order to reduce the repetition rate, the server adds an arbitrary value and the current time in the process of composing the string; that is, the server composes the generated arbitrary value $R$, user password $PW$, current time $TIME$, and Internet Interconnection Protocol address $S_{IP}$ into a new character sequence to obtain

$$R_A = R | T_{TIME} | S_{IP}. \quad (10)$$

After receiving the account order plaintext $P_{W'}$, the client uses a specific method to encrypt the plaintext:

$$P_{W'} = K \times P_{W'}. \quad (11)$$

The adaptive scheduling algorithm is used to deeply process the sequence generated by the server, obtain the final user identity judgment data, and transmit the MD data to the server. The process is defined as

$$MD = R_a \times P_{W'}. \quad (12)$$

The user security authentication is divided into client program and server program. In the client program, the client first transmits the password ciphertext to the server and starts listening for the confirmation information waiting for the server to pass back. After obtaining the confirmation information, subtract 1 from any value transmitted back by the server and encrypt and send it to the server. The random number is subtracted by 1 every two minutes and encrypted at the same time. If the client sends the logout information to the server after the client task is processed, the server will logout the user login information.

In the server program, the adaptive scheduling algorithm is used to verify the user password ciphertext and send a confirmation message. Send ciphertext to the client and suppress it, and use user information to complete login. If the
login information is not received for a period of time, disable
the user login information and realize high-quality user
security authentication, so as to complete the design of mul-
tichannel resource adaptive scheduling algorithm for English
online translation teaching.

4. Experiment

Taking a university as the experimental object, this algo-
rithm is used to manage the multichannel resources of
English online translation teaching in that university, and
the effectiveness of this algorithm is verified. In order to
prove the performance reliability of the scheduling algo-
rithm in this paper, according to the actual scale of multi-
channel resource scheduling platform for English online
translation teaching, the configuration of test environment
and comparative test environment is shown in Table 2.

The test environment in this paper is completed under
the condition of limited hardware resources. When testing
the concurrent upload of 300~700 resources, the discrimina-
tion of the test results is not high, and it has a certain dis-
 crimination only when transmitting 800 data concurrently.
In order to ensure the intuitiveness of the experimental
results and prevent the poor discrimination of performance
data caused by low concurrency, 1100 concurrent data were
selected for testing. The test configuration parameters are
approximately equal. Table 3 shows the configuration
parameters of the experiment.

Based on the above research, the performance of the pro-
posed algorithm is tested by using a fully automated testing
tool; test the limit value and the operation of the algorithm
under load conditions. The purpose of load test is to judge
whether the algorithm can operate normally under different
loads. The purpose of limit value test is to judge the perfor-
ance limit point that is not acceptable to the platform, that
is, the algorithm bottleneck, and the scheduling platform
performance test results under the proposed algorithm are
shown in Table 4.

According to the test in Table 4, the test results of each
functional module of the scheduling platform under the
algorithm in this paper meet the functional requirements.
The overall business function of the platform can accurately
complete the work according to the business solution
requirements without any problems. It has high application
value and reasonably manages multichannel teaching
resources. Therefore, the platform will not collapse.

The proposed English online translation teaching multi-
channel resources have multiple resources that need to be
updated. It is set that the original English online translation
teaching multichannel resources are divided into 6 groups,
and each group has different update upper limits. When
the designed algorithm is used to schedule the multichannel
resources of English online translation teaching, the multi-
channel teaching resources are updated in real time. The
real-time update results of English teaching multichannel
resources are shown in Figure 6.

It can be seen from Figure 6 that when the designed
algorithm is used to schedule English teaching multichannel
resources, the update amount of teaching multichannel
resources is close to the upper limit of update, which is not
much different. This is because this method integrates all
the data of the mode into the central database by construct-
ing a central database and arranges the teaching resources of
multopath in the central database according to a certain
schedule, which is convenient for future inquiry. At the same
time, in order to facilitate resource allocation in stages and
steps, the system planning mode is divided into three levels:
basic layer, environment layer, and application layer, which
is closer to system updating in a sense.

100 students were randomly selected in the same grade
of the school. These students have different learning abilities.
After three months of application of the algorithm in this
paper, the students’ interest in English online translation
teaching before and after the application of this algorithm
was counted. The statistical results are shown in Figure 7.

After Figure 7 shows that this algorithm is helpful to
improve students interested in teaching English online
translation, after the application is not interested in teaching
English online translation is very and the proportion of stu-
dents are not interested in 1%, respectively, students of aver-
age degree of interest in teaching English online translation
than before application decreased more significantly. The
proportion of students who are interested or very interested in the teaching increased significantly. Experimental results show that the proposed algorithm can effectively improve students’ interest in online English translation teaching.

The algorithm is used to schedule the distributed English teaching resources of multi campus in an area. The experimental results are shown in Figure 8.

It can be seen from Figure 8 that with the continuous increase of the total amount of English teaching resources, the speed of resource scheduling will gradually decrease. However, although the teaching resources scheduled by the algorithm in this paper will also decrease, the speed and range of decline are not large. This is because the algorithm in this paper is mainly realized through the distributed resource database. Distributed resource database is a resource database in which resources are distributed and stored in multiple computers in different nodes, which is connected through a computer network. In the distributed resource base module, all node resource base modules can independently support local applications and provide resource scheduling ability for other nodes; to some extent, it is beneficial to improve the efficiency of English teaching resource scheduling.

5. Conclusion and Prospect

(1) The test results of each functional module of the scheduling platform under the algorithm in this paper meet the functional requirements, and the overall business function of the platform can accurately complete the work according to the business solution requirements.

(2) When using the designed algorithm to schedule English teaching multichannel resources, the update amount of teaching multichannel resources is close to the upper limit of update.

(3) The designed multichannel resource adaptive scheduling algorithm for English online translation teaching can reasonably manage teaching resources, to enhance students’ interest in online English translation teaching and improve their learning ability. The proposed algorithm is helpful to improve the efficiency of English teaching resource scheduling.

However, the designed algorithm is only aimed at the scheduling of English online translation teaching resources, and the designed scheduling model cannot efficiently provide better resources for students and teachers. Therefore, the next research is to add a resource recommendation module on the basis of the designed algorithm, which can recommend better English online translation teaching resources according to users’ preferences.

Data Availability

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

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